MOBILITY ON DEMAND (MOD) SANDBOX

Valley Metro Rail, Inc. (Phoenix, AZ)

Mobility Platform

TEAM AND BUDGET

Key Partners: Route Match Software, City of Phoenix Public Transit Department, Arizona State University

Other Partners: None

Budget Summary: The budget from the applicant is summarized below:

MOD Sandbox Demonstration Federal Amount ($)	MOD Sandbox Cost Share ($)	Total Cost
$1,001,000	$399,000	**$1,400,000**

INNOVATION: PROJECT APPROACH

Valley Metro is the regional public transportation agency in Maricopa County, Arizona providing coordinated, multimodal transit options to approximately four million residents of the Phoenix metropolitan region. With a core mission of developing a regional and fully integrated transit network, Valley Metro plans, develops and operates the regional bus and light rail systems and alternative transportation programs for commuters, seniors and people with disabilities. Valley Metro will develop a mobile application for all major smartphone devices that will integrate mobile ticketing and multimodal trip planning to provide fast and reliable transit and local travel information.

The proposed Valley Metro Mobility Platform will build upon Ridekick™, Valley Metro's existing mobile application, by adding features not currently available to users. The envisioned Mobility Platform will enable users to receive real-time travel information, purchase tickets for both public and private transportation modes, and utilize an optimized trip planning service through the integration of non-Valley Metro operated services such as Uber, Lyft, GR:D Bike Share, Zipcar, etc. With the formation of public-private partnerships (P3s), the mobile application will let riders choose specific travel itineraries based on travel time, mobility preferences and proximity to transit options, as well as trip cost estimates. The enhanced integration will improve the level of connectivity throughout the transit network, thereby decreasing the first/last mile challenge facing public transportation users and allowing users to smoothly complete their trip from their point of origin to final destination. This mobile application will allow Valley Metro and private transportation services to utilize technology to provide a multimodal travel planning service with the simplicity of a mobile interface and single payment system.

The application will be free to download on all major mobile device operating systems including, but not limited to, the iOS (iPhone and iPad) and Android OS (Samsung, LG, HTC, etc.). Users will be able to create personalized accounts suitable to their needs and will be able to track travel patterns, use a single payment system for public/private transportation modes, as well as receive electronic discounts for local events such as basketball games, concerts, movie theaters, restaurants, etc. These application features will be available to anyone with a connected mobile device, but most importantly, the application will provide personalized travel options established in the user's account settings, including travel or accessibility features for people with disabilities. Valley Metro will use an open data platform design to allow other public transportation agencies to use the application; however, they will be able to adjust the features and functionality of the application to meet the needs and requirements for their respective service area and clients.

The Mobility Platform will be implemented in two phases. Phase I includes improvements to Valley Metro's Ridekick™ application to include mobile ticket purchasing using wireless capabilities and multimodal booking options with GR:D Bike Share. In addition, non-fare payment services such as incident reporting capabilities will also be integrated in Phase I. Phase II will expand mobile ticket purchasing options to include transportation network companies (TNCs) such as Lyft, Uber, Zipcar and others. Additional features to be deployed as part of Phase II will include opportunities for businesses to provide combined event and transportation ticket purchasing in a single payment.

CHALLENGES PROJECT IS DESIGNED TO ADDRESS

The current Ridekick™ mobile application limits users' ability to plan multimodal trips. Currently, if a passenger wanted to know all the potential travel options in their immediate vicinity, as well as utilize and pay for one of those services, they would need to visit multiple applications on their smartphone. For example, riders need to access Ridekick™ for bus and rail schedules, Uber or Lyft for transportation network company choices, and Social Bicycles for GR:D Bike. A fundamental component of improving the mobile application is to include a trip planning tool that includes a combination of public and private transportation alternatives. The new mobile application would not only provide a greater volume of travel options, but also provide users with personalized information about the environmental and economic benefits of each travel route. For example, someone querying the application would get a trip cost estimate, amount of CO_2 saved from using alternative mobility options versus automobile travel, calories burned, and amount of gas money saved displayed with each travel option. Beyond this, the application would provide a single, integrated payment system for all trips. Additionally, the new added convenience of mobile ticketing would be accompanied by real-time trip tracking for Valley Metro bus and light rail services, both of which are currently not available.

ANTICIPATED OUTCOMES, BENEFITS, IMPACTS

The development of the Mobility Platform will enable real-time travel and trip planning functions for public transportation riders, which are currently not available on the Ridekick™ application. The Mobility Platform will consolidate all trips using public and private transportation choices to allow riders more flexibility when choosing their travel mode. Users will be able to see the cost of gasoline saved, amount of CO2 saved from using alternative modes of travel, as well as route travel-time comparisons. The Mobility Platform will also provide riders a universal payment system for all public and private transportation choices, thus enhancing connectivity, integrating sustainable transit solutions, such as car sharing and vanpool travel choices, as well as providing real-time travel data for riders throughout the Phoenix Metropolitan Region. Providing real-time trip information will save riders' time, thereby improving system efficiency and helping address perceived wait times. The mobile ticketing element also provides a sustainable solution as it will reduce the need for passengers to use fareboxes or ticket vending machines which, in turn, reduces paper-based and card-based tickets.